

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/20/09 has been entered.

Election/Restrictions

2. This application contains claims 5-7 and 14-16 drawn to a nonelected invention. The claims are withdrawn and are not considered on the merits. Amendments to the claims are not timely; see MPEP § 821.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 8-10, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen (US 4,721,294) in view of Franklin (US 6,546,867).

Petersen discloses a folding device in a printing unit, (rotary or otherwise) comprising cut-off unit with variable speed cutting mechanisms/rollers 5a, 5b for

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receiving the web 1a 1b and cutting as desired; first variable speed belt conveyors 99, 100; second variable speed belt conveyors 97, 98 positioned downstream one another for controlling the speed of the web (deceleration); and downstream processor (folding/collecting device); see figures 1-4. The cutting system controls the speeds of the cutting devices and the cutting cylinders to cut the sheets to desired lengths as claimed and is variable to create separation of cut sheets 7a and 7b; see column 2, lines 40+. The first belt conveyors operate at a speed V1 than that of second belt conveyors 97, 98 which act to slow sheet conveying speed from V1 to V2; see column 6, lines 1+ and controllably deliver the sheets to the downstream processing stations including inserting station 40; folding station 38 (perpendicular fold to conveying direction). Petersen discloses abutting portion comprising stops 31a – 31d. Petersen does not directly disclose the printing unit comprising a printing cylinder with a variable diameter for adjusting; however Franklin discloses variable diameter cylinders for use in printing units; see figure 1. It would have been obvious to one of ordinary skill in the art at the time of the invention to include an adjusting diameter printing cylinder as taught by Franklin in the invention to Petersen for handling various lengths of products.

Regarding claims 8-9, Petersen does not directly disclose operating a processor faster than first belt conveyor it is considered an obvious control use of the device. Furthermore Petersen does not disclose decelerating the second belt to match the speed of the first belt, however while features of an apparatus may be recited either structurally or functionally, claims directed towards an apparatus must be distinguished from the prior art in terms of structure rather than function. See *In re Schreiber*, 128

F.3d 1473-78, 44 USPQ2d 1429-32 (Fed.Cir. 1997) and *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed.Cir. 1990).

Furthermore, a limitation directed to an intended use of an apparatus or a process requires a structural difference or a manipulative difference between the claimed invention and the prior art. See *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963); *In re Sinex*, 309 F.2d 488, 492, 135 USPQ 302, 305 (CCPA 1962); *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed.Cir. 1997).

5. Claims 1, 8-10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Reffert (US 4,491,310) in view of Franklin (US 6,546,867) and further view of Vijuk (US 4,812,195).

Reffert discloses a folding device for the production of printed booklets (ie. downstream a printing machine, rotary or otherwise) comprising cut-off unit with cutting mechanisms/rollers 14 for receiving the web; first belt conveyor 10a; second belt conveyor 10b; and downstream processor (folding/collecting device). The first belt conveyor 10a operates at a slower speed than that of second belt conveyor 10b in order to gradually accelerate (vary the speed of) the cut sheets; see figure 1, column 7, lines 4+. Collecting/catching cylinder 1 with grippers 2, folding blades 3 and folding cylinder 4 form folded creases transversely to the conveying direction as known in the art. Reffert does not disclose an adjustable diameter printing cylinder however Franklin discloses variable diameter cylinders for use in printing units; see figure 1. It would have been obvious to one of ordinary skill in the art at the time of the invention to include an

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adjusting diameter printing cylinder as taught by Franklin in the invention to Reffert for handling various lengths of products. While Reffert discloses operating the second belt conveyor at a higher speed than first belt conveyor and the sheet conveying speed accelerates during its transfer to match the speed of the downstream processor, it is not labeled a variable speed conveyor. Furthermore the second belt conveyor is not disclosed to slow to the speed of the first conveyor, however Vijuk discloses variable speed belt conveyor 108 for altering the speed of a cut product as desired for transporting downstream to a folding processor; see figure 1, column 7, lines 16+. It would have been obvious to one of ordinary skill in the art to use a variable speed drive for controlling the belt speed of the second conveyor. Note that Reffert discloses slowing products by abutting stop member 23 for control purposes of the products while transported by the second belt conveyor.

Regarding claim 9, Reffert does not directly disclose decelerating the second belt to match the speed of the first belt, however while features of an apparatus may be recited either structurally or functionally, claims directed towards an apparatus must be distinguished from the prior art in terms of structure rather than function. See *In re Schreiber*, 128 F.3d 1473-78, 44 USPQ2d 1429-32 (Fed.Cir. 1997) and *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed.Cir. 1990). Furthermore, a limitation directed to an intended use of an apparatus or a process requires a structural difference or a manipulative difference between the claimed invention and the prior art. See *In re Otto*, 312 F.2d 937, 938, 136 USPQ

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458, 459 (CCPA 1963); *In re Sinex*, 309 F.2d 488, 492, 135 USPQ 302, 305 (CCPA 1962); *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed.Cir. 1997).

6. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen (US 4,721,294) in view of Franklin (US 6,546,867) and further view of Stab (US 6,019,714).

Petersen does not directly disclose a first partial cut-off mechanism before the cut off unit 5a, 5b, however Stab discloses a folding apparatus comprising perforators 4 and cut-off cylinders 6 with conveying belt pair devices 8-9, 11-12, 16-17; 18-19; 21-22, 23-24 for decelerating the webs to conform gradually to the processing devices 28-32. Conveyor belt pairs 8-9 forward the sheets to the first cut-off device/perforator 4; see figure 1. It would have been obvious to one of ordinary skill in the art to include a first cut off device (perforator) and nip conveyor belt system as disclosed by Stab in the modified invention to Petersen in order to partially cut the sheets during transfer and controllably deliver them downstream.

Response to Arguments

7. Applicant's arguments filed 10/20/09 have been fully considered but they are not persuasive. The newly added limitation to claim 1 does not add structural elements which materially affect the control of the cut off length. Printing cylinders may adjust in diameter to handle printed products of varying length prior to cut off. One of ordinary skill would easily recognize for providing for adjustability for the conveyors of Reffert. Further note that it has been held that the provision of adjustability, where needed,

involves only routine skill in the art. In re Stevens, 101 USPQ 284 (CCPA 1954). Note that a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill. While evaluating obviousness, one must ask whether the improvement is more than the predictable use of prior-art elements according to their established functions; see *KSR Int. v. Teleflex 550 US__* (2007).

To determine whether there was an apparent reason to combine the known elements in the way a patent claims, it will often be necessary to look to interrelated teachings of multiple patents; to the effects of demands known to the design community or present in the marketplace; and to the background knowledge possessed by a person having ordinary skill in the art; *ibid.*

The analysis need not seek out precise teachings directed to the challenged claimed specific subject matter, for a court can consider the inferences and creative steps a person of ordinary skill in the art would employ. Under the correct analysis, any need or problem known in the field and addressed by the patent can provide a reason for combining the elements in the manner claimed; *ibid.*

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Harmon whose telephone number is (571) 272-4461. The examiner can normally be reached on Monday-Friday from 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher R Harmon/

Primary Examiner, Art Unit 3721